Patients were followed for at least 3 years (follow-up at 1 yr 98%, at ≥3 yrs 92%). The safety primary end point was a composite of cardiac death and non-fatal myocardial infarction (with or without stent thrombosis, according to Academic Research Consortium definitions), and for efficacy target lesion revascularisation (TLR). Target vessel revascularisation excluding TLR (TVR) and non TVR were also assessed.

Results: We included 502 patients (mean age 70 years) presenting with ACS (52%) or a stable condition (48%), but not acute MI, of who 233 were diabetic and 381 (76%) were male. During follow-up 30 pts (6%) died, with cardiac death in 12 pts (2.4%). Nonfatal myocardial infarction occurred in 12 pts (2%). Stent thrombosis was noted in 15 pts (3%): 4 definite (3 acute), 6 probable (1 sub-acute), and 5 possible; 4 acute or sub acute, 4 late and 7 very late ST. At 3-years, the safety endpoint rate was significantly higher in diabetic than in non-diabetic patients (8% vs.1%, $p \leq 0.001$), whereas TLR was not significantly different.

Conclusions: In everyday practice the PES has a good efficacy with comparable clinical parameters for restenosis in DP and NDP at 3 years. PES are clinically safe, however the risk of paclitaxel stent thrombosis, including very late ST, is higher for DP.

023

Percutaneous coronary intervention using drug-eluting stents in elderly (>70 years) diabetic patients : comparison to younger patients

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Purpose: The elderly (EL) constitute a rapidly expanding part of our population and cardiovascular disease becomes more prevalent with increasing age. Encouraging results with the use of drug-eluting stents (DES) has been presented in patients (pts) with coronary artery disease. In this prospective study, we assessed the short- and long- term results of DES in diabetic (D) EL, as compared to younger (YO) pts.

Methods: A total of 610 consecutive pts (mean age 65±9 years) that had been treated with DES were classified in 2 groups according to age: 1) YO pts (N=429, age ≤70 years); 2) EL pts (N=181, age >70 years). Clinical outcome at follow-up (FU) (median 29 months) was obtained in 98% of pts. Adverse events at FU were considered death, myocardial infarction (MI), cerebrovascular accident (CVA), bypass surgery (CABG), target (TLR) and non-target (non-TLR) lesion revascularization.

Results: EL group had more women (30% vs. 16%, p=0.001), a higher incidence of hypertensive (85% vs. 77%, p=0.03), with previous CABG (25% vs. 14%, p=0.001), and ejection fraction < 40% (15% vs. 9%, p=0.05) compared to YO pts. The clinical success rate (angiographic success without death, Q- wave MI, emergency CABG) was high (>99%) in both groups; more bleeding complications (1.1% vs. 0%, p=0.09) were observed in EL pts. At FU a higher rate of death (10.3% vs. 2.8%, p<0.001), CVA (4.6% vs. 0.7%, p=0.003), and combined death/MI/CVA (15% vs. 6%, p<0.001) was observed in EL pts; YO pts had a higher rate of non-TLR (19% vs. 11%, p=0.02). Definite and probable stent thrombosis was similar in both groups, but possible stent thrombosis was higher in EL pts (p=0.02).

Conclusion: The long-term effectiveness of DES in EL D is lower due to an increase risk for death or CVA, compared to YO pts.

024

Validation with thallium 201 of a new cadmium-zinc-telluride (CZT) cardiac camera

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Background: novel dedicated ultrafast cardiac cameras had recently be introduced to improve myocardial perfusion imaging

Objectives: We report the first validation study with thallium-201 and the new GE Discovery NM 530c CZT cardiac camera.

Methods: We prospectively studied with thallium-201 153 consecutive patients referred for myocardial perfusion imaging at exercise (111 to 148 MBq) then redistribution (with a 37MBq reinjection).
We performed sequential acquisitions, first with conventional dual head tomographic Anger camera (CC) in 11 to 16 mn, then with CZT camera (CZT) in 5mn, in prone then in supine position.

Results:
– we excluded 7 patients: 1 for mispositionning, 1 for camera failure, 1 for too late acquisition after exercise, 1 for non acceptation of redistribution by the patient, 1 for motion of the patient.
– acquisition was more comfortable with CZT for all patients.
– counts rate was 3 times more with CZT than with CC (3.5 to 5 KCts/s vs 1 to 1.5).
– myocardial counts rate was 6 to 8 times more with CZT than with CC.
– comparison between CZT and CC: quality of CZT images was considered as better in 38%, equal in 59% and worse in 3% of cases; diagnostic conclusions were the same in 137 of 146 cases (94%); discordances were 2 artifacts with CC, 1 artifact with CZT, 4 early redistributions and 2 discordances about reversibility of thallium defect.
– comparison between prone and supine with CZT: quality of prone images was considered as better in 41%, equal in 34% and worse in 25%; there were 2 times more artifacts in supine (14%) than in prone (7%) (p=0.05).

Conclusions: With thallium-201, the GE Discovery NM 530c CZT cardiac camera allows 5 minutes acquisitions with an increased image quality and a reliable diagnosis quality, both in prone and in supine positions.

025

Validation of a "low dose thallium 201 protocol" with a cadmium-zinc-telluride (CZT) cardiac camera

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Background: Thallium 201 is the most efficient radiotracer for myocardial perfusion imaging but leads to relative high radiation exposure for patients.

Objectives: We used a new cardiac CZT camera to decrease the effective dose with thallium-201 in myocardial perfusion imaging.

Methods: We prospectively studied 137 consecutive patients referred for stress myocardial perfusion imaging and who previously had in the last 5 years a myocardial SPECT with thallium-201. We injected at stress a low dose of thallium 201 (1 to 1.2 MBq/kg, i.e. 74 MBq for 70kgs), performed stress myocardial imaging in 5 to 7 mn with a CZT camera GE Discovery NM 530c and redistribution imaging when initial images were abnormal, with reinjection (37MBq) when previous myocardial infarction or severe defect or without reinjection in other cases. We compared the CZT scan with the scan previously performed in the last 5 years with conventional dual head tomographic Anger camera (CC) with a regular dose of thallium-201.

Results: Patients had known coronary artery diseases in 85% of cases, myocardial scar in 38% and ischemia in 20%.
The average stress dose was 88 MBq versus 125 MBq previously (–30%)
The average time for camera acquisition was 6 mn versus 13 mn (–54%)
The cardiac counts statistic was higher with CZT (>1Mcts)
By comparison with CC, the quality of CZT images was better (better delineation of left ventricular cavity, visualization of papillary muscles, easier thickening analysis) in 70% of cases, equal in 24% and worse in 6% (6 artefacts, 2 digestive contaminations)
Comparison of artefacts showed 30 unmodified, 29 less and 6 additionnal artefacts.
By comparison with the previous SPECT, we missed no pathological image; furthermore, we detected 5 true pathological images which were missed with the CC.
Calculated effective dose was less than 12 mSv when no reinjection and less than 18 mSv when reinjection

Conclusions: With reduced activities of thallium 201 (-30%) and effective doses between 12 and 18 mSv, CZT camera gives reliable high quality imaging